

WMRC Factsheet

Reducing Auto Body Shop Waste

Almost everyone wants a good-looking car. However, accidents happen or the car eventually suffers from time and salted winter roads. So off it goes to an auto body shop for repair and/or a paint job.

In Illinois, there are about 3,400 licensed auto body shops, 3,187 of which routinely use paint. Painting over scratches, a fixed dent, or rust repair doesn't seem like much, but added together, painting cars produces a lot of waste. The shops buy greater than 1.5 million gallons of paint a year, and about 60,000 gallons of that is lost in overspray (the paint that misses the intended target). Another 948,000 gallons are carted off to landfills in the form of solvents and paint waste. The paint itself emits about 3,600 tons of volatile organic compounds (VOCs) a year into the atmosphere, contributing to the ozone problem.

Auto body shops can decrease paint waste by using some of the techniques presented in this factsheet.

Mixing

Mix only the amount of paint needed to get the job done. This is hard because the containers often have more paint than is needed for many jobs, but some shops have hired mixing specialists. The rationale is, mixing only the necessary amount will save enough money to hire the specialist—maybe more. Using less paint will also cut down on VOC emissions and the amount of solvents needed for clean-up.

Increase Transfer Efficiency

An air-atomized conventional spray gun has a

transfer efficiency of about 20 to 40%. The rest of the paint is wasted as overspray. A High Volume Low Pressure (HVLP) gun has 75 to 80% efficiency. An HVLP gun costs about \$1,000, but pays for itself quickly by using less paint.

A gravity feed airless conventional gun, one that has a paint cup over the gun to let the paint flow down, has a transfer efficiency of 35 to 55%.

Of course, part of transfer efficiency is simply the painter's skill. Painters shouldn't arc the gun and spray paint into the air. They should keep a fixed distance from the car. The air pressure in the spray gun should be regulated because too much pressure will cause the paint to bounce off the car and form a fog, wasting paint. Operator training alone can increase efficiency 30 to 60%.

Reduce, Reuse or Recycle

Reuse old paints and thinners, if possible. For example, old paint could be blended with thinner and used as undercoating. Use a 50 micron filter to strain out old paint from used thinner; the thinner can be used again and the paint sludge can be used for undersealing. Don't hesitate to use the thinner again and again until it loses its effectiveness.

Waste thinner can also be used for parts cleaning in auto repair shops or for painting obscured parts, under the hood or in the wheel wells, even if the thinner contains multiple colors.

Solvents sprayed through paint guns can be reclaimed. Having a dedicated primer gun cuts down on cleaning because primers are usually the same color. Tight lids or spigots on containers reduce

the evaporation of thinners and the amount of thinner body shops must buy.

When cleaning paint cups, the cups should be scraped with a spatula and then rinsed with solvent. This cuts down on solvent usage.

Leftover paints can often be given to interested customers for touch-up work.

Paints and thinners that are no longer reusable should be sent to a solvent recycler or a fuel blender.

Rigid Inventory Control

An auto body shop can reduce expenses without investing by simply monitoring its inventory. Smaller shops should check product usage and suggest limits to its employees. Larger shops may find it more difficult to monitor employees, but they can restrict access to the store room, encouraging employees to use materials more efficiently. Storeroom should dispense inventory on a “first in, first out” basis, so that nothing gets too old to use and becomes hazardous waste.

Although some of these techniques require a modest investment, such as an HVLP gun or a filter, they do pay for themselves in lower paint and thinner purchases, and significantly reduced waste and disposal costs.

For further information about thinner recyclers in Illinois or a list of recyclers, call the Automotive Service Association at 800-272-7467 or visit their web site at <<http://www.asashop.org>>.